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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,052	12/11/2003	Satoshi Maeda	1111.68794	7846

7590 08/13/2004

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EXAMINER

HAN, JASON

ART UNIT PAPER NUMBER

2875

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/733,052	Applicant(s) MAEDA ET AL.	
	Examiner Jason M Han	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>US Patent 6163351</u> . |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because of its undue length. It is almost verbatim of the Disclosure of Invention found on Pages 6-7. Correction is required. See MPEP § 608.01(b). Please further note (f) and (j) listed in the 'Content of Specification'.
5. The disclosure is objected to because of the following informalities:

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- a. Page 5, Line 5: Grammatical Error – please reword to read ‘can be’;
- b. Page 5, Third Paragraph – consider rewording;
- c. Page 11, Line 7 – repeated use of ‘which will be described later’;
- d. Page 36-37, Last Sentence – consider rewording;
- e. Page 37, First Paragraph – consider rewording last sentence;
- f. Page 38, Line 4 – reference number 200 should read 60.

Appropriate correction is required.

6. The disclosure is further objected to because of the following informalities: throughout the application and as shown in Figure 1, the inventor claims that light emitted from the light source and incident upon the polarization sheet is transmitted (L3) and reflected (L4), wherein the said reflected L4 is normal to the first polarized direction (L3). However, normal is in a direction perpendicular, which stands in contrast to the current situation that appears parallel.

Appropriate correction is required.

Claim Objections

7. Claim 3 is objected to because of the following informalities: Line 3 of claim – ‘an’ should read as ‘a’. Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-4, 7, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Taira et al. [U.S. Patent No. 5712694].

10. With regards to Claim 1, Taira discloses a lighting device comprising a light guide plate in the shape of a flat plate [Figures 9 and 10: (103); Column 6, Lines 12-14], a light source unit disposed on the side of said light guide [Figures 9 and 10: (101)], and a polarization separation element disposed between said light guide and source [Figures 9 and 10: (601)].

11. With regards to Claim 2, Taira discloses a phase modulation element [Figure 10: (604)] disposed between a light source unit and a polarization separation element.

12. With regards to Claims 3, Taira discloses a light source unit including a light emission source [Figure 10: (101)] and a reflecting member [Figure 10: (102)].

13. With regards Claim 4, Taira discloses a linear light emission source [Figure 10: (101); Column 6, Line 54; Column 12, Line 22] and a reflecting member that surrounds said light source [Figure 10: (102)].

14. With regards to Claim 7, Taira discloses a lighting device comprising a phase modulation element [Figure 10: (604)] disposed between a light guide plate in the shape of a flat plate [Figure 10: (103); Column 6, Lines 12-14] and a light source unit disposed on the side of the said guide plate [Figure 10: (101)].

15. With regards to Claim 10, Taira discloses a liquid crystal display device comprising a liquid crystal panel [Figure 31: (2604)] and a lighting device further

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comprising a light guide plate in the shape of a flat plate [Figure 31: (2611)], a light source unit [Figure 31: (2605)] disposed at the side of the said guide plate, and a polarization separation element [Figure 31: (2606): Column 4, Line 57 – Column 5, Line 24].

16. With regards to Claim 11, Taira discloses a liquid crystal display described in Paragraph 16 above, and further comprising a phase modulation element [Figure 31: (2608) – an auxiliary light guiding plate] disposed between the light source unit and the polarization separation element. Taira teaches that the auxiliary light guiding plate serves as a light converting element [Column 20, Lines 35-43], whereby a “light converting element may be a diffusion member, a retardation film, or the combination thereof... As the retardation film, a half-wave film can be used... On the other hand, a quarter-wave film can be used [Column 5, Lines 35-50].”

17. With regards to Claim 12, Taira discloses a phase modulation element [Figure 31: (2610)] disposed between the liquid crystal panel and the lighting device.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 5-6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taira et al. in view of Saito Takeshi et al. [Japanese Publication No. 2000-292786].

With regard to Claims 5-6 and 8-9, Taira discloses a lighting device comprising a light guide plate, a light source unit disposed on the side of said guide plate, and a polarization separation element (or phase modulation element or combination thereof) disposed between said guide plate and light source [see Paragraphs 12-16 above].

Taira does not disclose a spot light emission disposed on the end surface of a pillar-shaped light guide.

Saito Takeshi discloses a spot light emission source [Figures 2a and 12a: (13)], wherein light exits the pillar-shaped light guide at a first side surface [Figures 2a and 12a: (11)], and the reflecting member is disposed on a second side surface opposed to the first side surface [Figures 2a and 12a: (11a)]. Saito Takeshi further discloses that said second side is of a prism surface.

It would have been obvious to use the spot light source with the pillar shaped light guide of Saito Takeshi for the lighting device of Taira to provide a linear light source which lights up an object surface so that its luminance distribution is symmetrical with respect to the length of the linear light source. Spot light sources are generally LEDs, which are powerful and inexpensively available, and allow for manufacturing of a smaller, lighter, and efficient light source.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to the current application:

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Japanese Publication Number: 06-160840 to Matsudaira Mitsushi.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMH



Sandra O'Shea
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